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| BASF CORPORATION    |             |                      | SERGENT, RABON A    |                  |
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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/723,900

Filing Date: November 25, 2003

Appellant(s): TAZZIA, CHARLES L.

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Anna M. Budde  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed October 17, 2007 appealing from the Office action mailed November 8, 2006.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

|                      |                 |         |
|----------------------|-----------------|---------|
| U.S. 4,496,684       | O'Connor et al. | 1-1985  |
| U.S. 6,479,613 B2    | Gras et al.     | 11-2002 |
| U.S. 2003/0150730 A1 | Hartung et al.  | 8-2003  |

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3, 4, 7-9, and 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hartung et al. (US 2003/0150730) in view of O'Connor et al. ('684) or Gras et al. ('613).

Hartung et al. disclose aqueous electrodepositable coating compositions, wherein an externally crosslinking binder, such as a cationic group containing active hydrogen functional epoxy resin, and crosslinking agent are homogeneously mixed as melts and subsequently emulsified into an aqueous medium to yield the coating composition. The reference discloses that the crosslinking agent may be selected from uretdione containing polyisocyanates, wherein dimerized (uretdione group containing) isophorone diisocyanate is disclosed as being one of the preferred crosslinking agents. See paragraphs [0007]-[0017], [0026], [0034], and [0044]. Hartung et al. disclose within paragraphs [0020]-[0026] that the cathodically depositable electrodeposition coatings employ quaternary ammonium, sulfonium, and quaternary phosphonium groups.

Though the primary reference discloses that a preferred crosslinking agent for the coatings is a dimerized or uretdione containing isocyanate, the reference fails to disclose an uretdione crosslinking agent that corresponds to appellant's claimed uretdione compound. However, uretdione containing crosslinking agents having appellant's claimed structure, wherein the uretdione diisocyanate is modified with a polyol compound to introduce urethane groups into

the uretdione structure, were known at the time of invention. This position is supported by the teachings of O'Connor et al. and Gras et al. O'Connor et al. disclose that uretdione containing polyurethane oligomers are useful for the production of aqueous polyurethane dispersion coatings. See abstract and columns 2 and 4 within O'Connor et al. Gras et al. disclose polyaddition products containing uretdione groups which are useful for the production of powder coating and stoving enamels. See abstract. Gras et al. further disclose that the uretdione polyaddition products may be reacted with active hydrogen functional epoxy resins. See column 4, lines 26 and 27. Therefore, given the teachings concerning the use of uretdione containing crosslinking agents within Hartung et al. and the disclosed utilities for the polyaddition compounds within the secondary references, the position is taken that one of ordinary skill in the art would have been motivated to employ the uretdione containing polyaddition compounds of the secondary references as the crosslinking agent of Hartung et al.

#### **(10) Response to Argument**

Appellant's arguments have been carefully considered; however, the position is maintained that the examiner has set forth a *prima facie* case of obviousness that has not been adequately rebutted by appellant. Appellant has argued that Hartung et al. teach many crosslinkers including epoxides and polyisocyanates; therefore, a crosslinker containing a uretdione structure is but one of many listed suitable crosslinking agents. Appellant further argues that Hartung et al. do not provide a preference or reason for using any particular crosslinker, including the polyisocyanate with uretdione groups, and appellants argue that no particular species of such compounds are provided. In response, appellant's argument ignores the fact that Hartung et al. specifically teach that the use of blocked polyisocyanates are

particularly preferred within paragraph [0070] and that Hartung et al. specifically teach that dimerized (uretdione group containing) diisocyanates are especially preferred within paragraph [0044]. Accordingly, it cannot be argued that Hartung et al. fail to teach a preference for the use of dimerized diisocyanates. The position is maintained that one of ordinary skill upon reading Hartung et al. would be motivated to select from the disclosed lists of crosslinking agents dimerized diisocyanates as a preferred group of crosslinking agents.

Appellant has argued that O'Connor et al. does not provide any motivation to include their polyurethane oligomer in an aqueous, electrodepositable coating composition. In response, it appears from appellant's argument that appellant has failed to appreciate the combined teachings of Hartung et al. and O'Connor et al. As aforementioned, Hartung et al. teach a preference for uretdione group containing diisocyanate derived crosslinking agents in the production of aqueous, electrodepositable coating compositions. Similarly, O'Connor et al. disclose the use of uretdione group containing polyurethane oligomers in the production of aqueous coatings. Accordingly, given the respective teachings to use uretdione group containing compounds as components of aqueous coatings, wherein the components are reactive with active hydrogen containing compounds, the position is taken that there is a sufficient nexus to combine the teachings of the references.

Appellant has argued that nothing in Gras et al. speaks to the use or suitability of its polyaddition product in an aqueous coating composition. In response, both Gras et al. and Hartung et al. disclose coating compositions derived from uretdione or dimerized isocyanates, and the position is taken that these teachings coupled with the teachings to produce aqueous coatings within Hartung et al. provide the necessary nexus to combine the teachings of the

references. In both references, the uretdione or dimerized isocyanates function as crosslinking agents for active hydrogen compounds, and the position is taken given the similarities of function and structure of the respective crosslinking agents that one of ordinary skill would have expected them to act as equivalents within Hartung et al. Furthermore, it is noted that appellant's goal was to use a solid crosslinking agent; therefore, it cannot be argued that the reference, drawn to powder coatings, wherein the components are solid, is from non-analogous art, since the reference is reasonably pertinent to the particular problem with which the inventor was involved, namely to utilize a solid crosslinking agent in a coating composition. Appellant has further argued that a *prima facie* case of obviousness cannot be based on the combination of Hartung et al. and Gras et al., because there is no reasonable expectation of success. In response, as aforementioned, given the functional and structural similarities between the respective uretdione containing compounds, the position is taken that one of ordinary skill in the art would have reasonably expected the polyaddition compounds of Gras et al. to function in the same capacity as the disclosed preferred dimerized compounds of Hartung et al. Despite appellant's arguments, the position is taken that the evidence of obviousness outweighs the evidence of non-obviousness.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

  
RABON SERGENT  
PRIMARY EXAMINER

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10/723,900  
Art Unit: 1796

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Romulo Delmendo

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